

Title (en)

FORMULATION FOR 3D PRINTING BONE IMPLANTS AND METHODS FOR PREPARING THE SAME

Title (de)

FORMULIERUNG ZUM 3D-DRUCKEN VON KNOCHENIMPLANTATEN UND VERFAHREN ZUR HERSTELLUNG DAVON

Title (fr)

FORMULATION POUR L'IMPRESSION 3D D'IMPLANTS OSSEUX ET PROCÉDÉS DE PRÉPARATION DE CELLE-CI

Publication

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Application

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Priority

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Abstract (en)

The present invention relates to the field of personalized medicine. In particular, the invention relates to a formulation comprising (i) a calcium phosphate cement or a magnesium phosphate cement and (ii) an hydrogel of polysaccharides, for 3D printing bone implants; characterized in that the polysaccharides comprise at least one selected from: silylated hyaluronic acid and silylated chitosan.

IPC 8 full level

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CPC (source: EP)

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C-Set (source: EP)

A61L 27/46 + **C08L 5/08**

Citation (applicant)

- WO 2021209616 A1 20211021 - INST NAT SANTE RECH MED [FR], et al
- WO 2021209616 A1 20211021 - INST NAT SANTE RECH MED [FR], et al
- WO 2011089267 A1 20110728 - INST NAT SANTE RECH MED [FR], et al

Citation (search report)

- [XDI] WO 2021209616 A1 20211021 - INST NAT SANTE RECH MED [FR], et al
- [A] GÖTZ LISA-MARIE ET AL: "Extrusion-Based 3D Printing of Calcium Magnesium Phosphate Cement Pastes for Degradable Bone Implants", MATERIALS, vol. 14, no. 18, 10 September 2021 (2021-09-10), pages 5197, XP093055267, Retrieved from the Internet <URL:https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8472049/pdf/materials-14-05197.pdf> DOI: 10.3390/ma14185197
- [A] KOWALEWICZ KATHARINA ET AL: "Comparison of degradation behavior and osseointegration of 3D powder-printed calcium magnesium phosphate cement scaffolds with alkaline or acid post-treatment", FRONTIERS IN BIOENGINEERING AND BIOTECHNOLOGY, vol. 10, 28 September 2022 (2022-09-28), XP093055270, DOI: 10.3389/fbioe.2022.998254
- [A] LIU WEIZHEN ET AL: "A novel injectable, cohesive and toughened Si-HPMC (silylated-hydroxypropyl methylcellulose) composite calcium phosphate cement for bone substitution", ACTA BIOMATERIALIA, vol. 10, no. 7, 1 July 2014 (2014-07-01), AMSTERDAM, NL, pages 3335 - 3345, XP055795377, ISSN: 1742-7061, DOI: 10.1016/j.actbio.2014.03.009

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